

REMARKS

In the Office Action, the Examiner rejected claims 1-3, 7, 9, 11-12, and 18-19 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,101,176 to Honkasalo et al. ("Honkasalo") in view of U.S. Patent No. 6,226,515 to Pauli et al. ("Pauli"). The Examiner also rejected claims 4, 8, 10, and 20 under 103(a) as being unpatentable over Honkasalo in view of Pauli and U.S. Patent No. 5,724,658 to Hasan ("Hasan"). The Examiner also rejected claims 5-6 and 13-16 under 103(a) as being unpatentable over Honkasalo in view of Pauli and U.S. Patent No. 6,801,777 to Rusch ("Rusch"). The Examiner has not mentioned claim 17 in the Office Action. In this Amendment, Applicants have amended claims 1, 8, and 9, have canceled claims 2, and 18-20, and have not added any new claims. Accordingly, claims 1, and 3-16 will be pending after entry of this Amendment.

I. Claims 1 and 3-8

In the Office Action, the Examiner rejected claims 1, 3 and 7 under 103(a) as being unpatentable over Honkasalo in view of Pauli. The Examiner also rejected claims 4 and 8 under 103(a) as being unpatentable over Honkasalo in view of Pauli and Hasan. The Examiner also rejected claims 5-6 under 103(a) as being unpatentable over Honkasalo in view of Pauli and Rusch.

Claims 3-8 are directly or indirectly dependent on claim 1. Claim 1 recites a system including a mobile station. The mobile station includes a first level 1, a first level 2, and a first level 3 protocol for a licensed wireless service that has a licensed wireless channel serviced by a telecommunications network. The mobile station also includes a second level 1, a second level 2, and a second level 3 protocol for an unlicensed wireless service that are activated when the mobile station is within an unlicensed wireless service area. The system also includes an indoor base station operable to communicate with the mobile station through an unlicensed wireless

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channel. The system also includes an indoor network controller coupled to the indoor base station and adapted to exchange signals with the telecommunications network. The network controller is configured to convert the second level 1, the second level 2, and the second level 3 protocol into a standard base station controller interface protocol recognized by the telecommunications network. The indoor base station operates transparently to the second level 3 protocol. The mobile station and the network controller are configured to establish a communication session on the unlicensed wireless channel using the standard base station controller interface protocol of said licensed network.

Applicants respectfully submit that the cited references, neither alone nor through piecemeal, hindsight combination, disclose many limitations of claim 1. Specifically, the cited references do not disclose, teach, or even suggest at least the following four limitations of claim 1. *First*, the cited references do not disclose, teach, or even suggest a mobile station that includes (1) a first level 1, level 2, and level 3 protocols for a licensed wireless service that has a licensed wireless channel serviced by a telecommunications network and (2) a second level 1, level 2, and level 3 protocols for an unlicensed wireless service that are activated when the mobile station is within an unlicensed wireless service area. *Second*, the cited references do not disclose, teach, or even suggest an indoor network controller that is configured to convert the second level 1, level 2, and level 3 protocols into a standard base station controller interface protocol recognized by the telecommunications network.

Third, the cited references do not disclose, teach, or even suggest an indoor base station that operates transparently to the second level 3 protocol. *Fourth*, the cited references do not disclose, teach, or even suggest a mobile station and a network controller that are configured to establish a communication session on the unlicensed wireless channel using the standard base station controller interface protocol of said licensed network.

In the Office Action, the Examiner correctly indicated that Honkasalo does not teach (1) a first level 1, level 2, and level 3 protocol for a licensed wireless service, a second level 1, level 2, and level 3 protocol for an unlicensed wireless service, and (2) a network controller configured to convert level 1, level 2, and level 3 protocols into a standard base station controller interface protocol recognized by the telecommunication network. The Examiner cited Pauli as disclosing such a system. Applications respectfully submit that, for at least the reason given below, Pauli also does not disclose, teach, or even suggest such a system.

For instance, Pauli teaches away from having two different level 1, level 2, and level 3 protocols. Figure 4 of Pauli illustrates a mobile station (MS) and a base station (BS) each having a program module (PGM) designed in accordance with the OSI/ISO layer model. *See also* column 3 lines 39-44 and lines 49-52 of Pauli. Applicants respectfully submit that the handover disclosed in Pauli is between the cells operating on the same ISDN layers and not on two different sets of protocols (i.e., a first level 1, level 2, and level 3 protocol for a licensed wireless service and a second level 1, level 2, and level 3 protocol for an unlicensed wireless service). The cited paragraphs in Pauli disclose handover between base station B-BS and the base station A-BS, both operating on similar ISDN layers. *See, Pauli, column 14, lines 1-20.*

Also, in the Office Action, the Examiner cited Honkasalo as disclosing a mobile station having a licensed channel and an unlicensed channel. Applicants respectfully submit that Honkasalo teach away from such mobile station by disclosing two sets of mobile stations: Indoor Mobile Stations (IMS) and Out Door Mobile Stations (OMS). *See, Honkasalo Column 6, Table 1; Figure 5, column 14, lines 39 to 49; and column 15, line 59 to column 16 line 11.* For instance, in column 16, lines 6-9 Honkasalo discloses that "[u]sers of a cordless handset may move within the coverage area of the cordless system and make and receive phone calls through the indoor base station and the PSTN." Also, in column 15, line 62 to column 16, line 1, Honkasalo

discloses that "[u]sers of OMSs 234 registered in the outdoor system may move through the cells of the system and make and receive phone calls through the base stations and the public phone network 248."

In addition, none of the cited references disclose, teach, or even suggest an indoor base station that operates transparently to the second level 3 protocol. As indicated by the Examiner, Honkasalo does not disclose a first and a second level 1, level 2, and level 3 protocols. Pauli, also, does not disclose, teach, or even suggest an indoor base station that operates transparently to the second level 3 protocol.

In the Office Action, the Examiner cited Honkasalo column 8, lines 33-39 as disclosing an indoor network controller. Applicants respectfully submit that Honkasalo in the cited paragraph discloses that the indoor base station is connected to a PBX (Private Branch Exchange) system which is used for connecting the indoor base to a traditional wired communication system and not a licensed wireless system. See, Honkasalo Column 8, line 41-43. Honkasalo also discloses a system controller and switch "which can selectively connect the indoor system to a PTSN system." See, Column 15, lines 23-26. Applicants respectfully submit that the disclosed system controller and switch are to connect the indoor base system to a Public Switched Telephone Network (PSTN) and not a licensed wireless telecommunication network.

In the Office Action, the Examiner also cited Honkasalo column 15, lines 10-15 for disclosing that the mobile station and the network controller are configured to establish a communication session on the unlicensed wireless channel using a standard base station controller interface of the licensed network. Applicants respectfully submit that, as indicated above, the mobile stations disclosed in Honkasalo work either indoor or outdoor. Furthermore, Honkasalo does not disclose an indoor network controller. Applicants respectfully submit that

the cited paragraph discloses the operation of the outdoor mobile stations in a licensed wireless network only.

In view of the foregoing remarks, Applicant respectfully submits that the cited references, neither alone nor through their piecemeal, hindsight combination, render claim 1 invalid. Given
 5 that claims 3-8 are dependent on claim 1, Applicant respectfully submits that these claims are allowable over the cited reference for at least the same reasons that were provided above for claim 1. In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the 103(a) rejection of claims 1, and 3-8.

II. Claims 9-16

10 In the Office Action, the Examiner rejected claims 9 and 11-12 under 103(a) as being unpatentable over Honkasalo in view of Pauli. The Examiner also rejected claims 8 and 10 under 103(a) as being unpatentable over Honkasalo in view of Pauli and Hasan. The Examiner also rejected claims 13-16 under 103(a) as being unpatentable over Honkasalo in view of Pauli and Rusch. The Examiner has not mentioned claim 17 in the Office Action. Applicants, however,
 15 have canceled claim 17.

Claims 10-16 are directly or indirectly dependent on claim 9. Claim 9 recites a method of providing wireless services using an unlicensed wireless service and a licensed wireless service. In a first mode of operation, the method utilizes a licensed wireless channel associated with a telecommunications network to service a communication session with a mobile station. In
 20 response to detecting that the mobile station is within a service area of said unlicensed wireless service, the method also generates level 1, level 2, and level 3 protocols of the mobile set for the unlicensed wireless service. The method also converts the level 1, level 2, and level 3 protocols for the unlicensed wireless service into a base station controller interface format compatible with the telecommunications network. Through an indoor base station, the method also sends a

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request to the telecommunications network in the base station controller format to service a communications session using an unlicensed wireless channel of the unlicensed wireless service. The indoor base station operates transparently to the level 3 protocol.

Applicants respectfully submit that the cited references, neither alone nor through
 5 piecemeal, hindsight combination, disclose many limitations of claim 9. Specifically, the cited combination of the references does not disclose, teach, or even suggest at least the following four limitations of claim 9. *First*, the cited references do not disclose, teach, or even suggest a method that in response to detecting that the mobile station is within a service area of the unlicensed wireless service generates level 1, level 2, and level 3 protocols of the mobile set for the
 10 unlicensed wireless service. *Second*, the cited references do not disclose, teach, or even suggest a method that converts the level 1, level 2, and level 3 protocols for the unlicensed wireless service into a base station controller interface format compatible with the telecommunications network.

Third, the cited references do not disclose, teach, or even suggest a method that, through an indoor base station, sends a request to the telecommunications network in the base station
 15 controller format to service a communications session using an unlicensed wireless channel of the unlicensed wireless service. *Fourth*, the cited references do not disclose, teach, or even suggest an indoor base station that operates transparently to the level 3 protocol.

In the Office Action, the Examiner correctly indicated that Honkasalo does not teach in response to detecting the mobile station is within a service area of the unlicensed wireless
 20 service, generating level 1, level 2, and level 3 protocols of the mobile set for the unlicensed wireless service; and converting the level 1, level 2, and level 3 protocols for the unlicensed wireless service into a base station controller interface format compatible with the telecommunications network. The Examiner cited Pauli for disclosing such a method.

Applications respectfully submit that, for at least the reason given below, Pauli also does not disclose, teach, or even suggest such a method.

For instance, as discussed in Section I above, Pauli teaches away from having two different level 1, level 2, and level 3 protocols. Figure 4 of Pauli illustrates a mobile station (MS) and a base station (BS) each having a program module (PGM) designed in accordance with the OSI/ISO layer model. *See also* column 3 lines 39-44 and lines 49-52 of Pauli. Applicants respectfully submit that the handover disclosed in Pauli is between the cells operating on the same ISDN layers and not on two different sets of protocols (i.e., a first level 1, level 2, and level 3 protocol for a licensed wireless service and a second level 1, level 2, and level 3 protocol for an unlicensed wireless service). The cited paragraphs in Pauli disclose handover between base station B-BS and the base station A-BS, both operating on similar ISDN layers. *See*, Pauli, column 14, lines 1-20.

In the Office Action, the Examiner also cited Honkasalo column 15, lines 1-25 as disclosing sending a request to the telecommunication network in the base station controller format to service a communication session using an unlicensed wireless channel of the unlicensed wireless service. Applicants respectfully submit that Honkasalo in the cited paragraph discloses that the outdoor communication system and the indoor system can each be connected to the Public Switched Telephone Network (PSTN). The cited paragraph does not disclose, tech, or even suggest sending a request to the licensed wireless telecommunication network to service a communication session using an unlicensed wireless channel of the unlicensed wireless service.

In the Office Action, the Examiner cited Honkasalo as disclosing a method of providing wireless services using an unlicensed wireless service and a licensed wireless service. As discussed in Section I above, Applicants respectfully submit that Honkasalo teach away from such a method by disclosing two sets of mobile stations: Indoor Mobile Stations (IMS) and Out

Door Mobile Stations (OMS). *See*, Honkasalo Column 6, Table 1; Figure 5, column 14, lines 39 to 49; and column 15, line 59 to column 16 line 11. For instance, in column 16, lines 6-9 Honkasalo discloses that “[u]sers of a cordless handset may move within the coverage area of the cordless system and make and receive phone calls through the indoor base station and the PSTN.” Also, in column 15, line 62 to column 16, line 1, Honkasalo discloses that “[u]sers of OMSs 234 registered in the outdoor system may move through the cells of the system and make and receive phone calls through the base stations and the public phone network 248.”

In addition, none of the cited references disclose, teach, or even suggest an indoor base station that operates transparently to the second level 3 protocol. As indicated by the Examiner, Honkasalo does not disclose a first and a second level 1, level 2, and level 3 protocols. Pauli, also, does not disclose, teach, or even suggest an indoor base station that operates transparently to the second level 3 protocol.

In view of the foregoing remarks, Applicant respectfully submits that the cited references, neither alone nor through their piecemeal, hindsight combination, render claim 9 invalid. Given that claims 10-17 are dependent on claim 9, Applicant respectfully submits that these claims are allowable over the cited reference for at least the same reasons that were provided above for claim 9. In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the § 103(a) rejection of claims 9-16 (As indicated above, the Examiner has not referenced claim 17 in the Office Action).

CONCLUSION

In view of the foregoing, it is submitted that all pending claims, namely claims 1, 3-16 are in condition for allowance. Reconsideration of the rejections and objections is requested.

Allowance is earnestly solicited at the earliest possible date.

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Respectfully submitted,

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